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SUBJECT—

TITLE

Forest Insect Detection Survey

St. Joe National Forest

1949

By

Forest Insect Laboratory
Coeur d'Alene, Idaho

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Report

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Detection surveys were directed to a number of areas on the St. Joe National Forest to determine the status of infestations of the mountain pine beetle. These were areas where previous surveys had indicated the existence of potentially dangerous situations, or where some abnormal forest conditions had been reported. Unfortunately there are perhaps other areas where infestations of equal or greater importance existed, and it is regretted that all such areas could not have been included in seasons survey program. These surveys were conducted by a three man crew under the field direction of Mr. Charles J. Johnson. Data obtained from the survey of these areas is shown in the following unit summaries:

1. Aspen-Entente Unit

Total Acres	1300
Acres of Sample Strip	44
Coverage of area	3.38%
Lodgepole pine trees on strip attacked by M.P.B. 1949	7
Number of 1949 attacks per acre	.16
Total of 1949 attacks	208

This unit comprises parts of sections 3, 4, 5, 6, 7, and 8, T. 45 N., R. 8 E. and lies between Aspen and Entente Creeks. The timber type is lodgepole pine and white bark pine. In addition to the 7 infested lodgepole pine trees recorded on the sample strip, a few old beetle killed lodgepole pine were recorded. This area should be re-examined in 1950.

Throughout this area there are many white bark pine trees showing discolored foliage, that can be seen from the roadside and other vantage points. Many of these trees were examined and found to be severly injured by blister rust. None of these trees had been attacked by bark-beetles.

2. Float Creek Unit

Total Acres	600
Acres of Sample Strip	24
Coverage of area	4%
Lodgepole pine trees on strip attacked by M.P.B. 1949	29
Number of 1949 attacks per acre	1.2
Total 1949 attacks	720

This unit is located to the north of Float Creek, in sections 12, 13, T. 45 N., R. 8 E., and sec. 18, T. 45 N., R. 9 E. Timber types is of lodgepole pine and white bark pine, with some white pine on the lower elevations. All barkbeetle attacks were in lodgepole pine, and a number of previously killed trees were recorded. A moderate amount of blister rust was recorded in white bark pine.

3. Head of Gold Creek Unit

Total Acres	200
Acres of Sample Strip	8
Coverage of acre	4%
Trees on strip attacked by M.P.B. 1949 (7 Lodgepole Pine - 1 White Pine)	8
Number of 1949 attacks per acre	1
Total 1949 attacks	200

This is a small area at the head of Gold Creek, and lies in sections 7, 8, T. 45 N., R. 9 E. The forest type is of white bark pine and lodgepole, with patches of each species occurring in pure stands. The pine area is bounded on all sides by non-host timber types. There would seem to be but little change in the present severity of this infestation from its status as reported in 1948. White bark pine trees in this area were badly discolored, apparently from blister rust injuries.

4. Head of Quartz Creek Unit

Total Acres	600
Acres of Sample Strip	8
Coverage of area	1.3
Trees on strip attacked by M.P.B. 1949 (Lodgepole)	4
Number of 1949 attacks per acre	.5
total 1949 attacks	300

This unit lies at the head of Gold Creek and is in section 10, 11, 12, T. 45 N., R. 9 E. The forest type is of white bark pine and lodgepole pine, with non-host trees of fir and hemlock adjacent. In addition to

the infested trees recorded on strip a number of lodgepole trees killed during previous years were observed. Many white bark pine trees appear to be red toped, but on examination were found to be heavily infected by blister rust. No mountain pine beetle attacks were recorded in any of these discolored white bark pine trees.

5. Bird Creek Unit

Total acres	2000
Acres of Strip	34
Coverage of Area	1.7%
Trees on strip attacked by M.P.B. 1949 (White Pine)	2
Number of 1949 attacks per acre	.059
Total 1949 attacks	118

This unit includes the east side of the Bird Creek drainage as far as Mirro Creek. It includes the lower elevations of the west side and the lower portion of the Bluebird Creek. Timber type on the east side is of white pine, but on the west it gives way to non-host timber. Although this situation is not serious it should be examined no later than 1951, by a more extensive survey.

6. Bottle Creek Unit

Total acres	900
Acres of Strip	18
Coverage of area	2%
Trees on strip attacked by M.P.B. in 1949	0
Number of 1949 attacks per acre	0
Total 1949 attacks	0

This unit is the Bottle Creek drainage in T. 45 N., R. 7 E.

7. Malin Creek

An extensive examination was made of this unit which includes some 1500 acres and covers most of the Malin Creek drainage. The timber type is white pine. No red toped white pine trees were recorded from an extensive reconnaissance and a small amount of sample strip showed no new attacks.

8. Eagle Creek Unit

Total acres	2880
Acres of Strip	40
Coverage of area	1.4%
Trees on strip attacked by M.P.B. 1949 (White pine)	7
Number of 1949 attacks per acre	.175
Total 1949 attacks	404

This unit (T. 45 N., R. 7 E.) comprises the Eagle Creek drainage, both sides of the creek as far north as the forks. This infestation although perhaps not warranting control at this time must be carefully watched. A re-survey in 1950 should be made.

9. Tumbledown Creek Unit

Total Acres	2030

An extensive examination, with a small amount (1.5%) of sample strip was made of this unit. No new attacks by the mountain pine beetle in white pine were recorded, and only a few scattered red tops were observed.

10. East Fork Gold Creek Unit

Total Acres	1935
Acres of Strip	25
Coverage of Area	1.2%
Trees on strip attacked by M.P.B. 1949 (White pine)	1
Number of 1949 attacks per acre	.04
Total 1949 attacks	79

This area includes most of the East Fork of the Gold Creek drainage. It starts about one half mile up the creek and extends to the Idaho Montana Divide. It includes the lower elevations of the north side but all of the south side. The existing infestation is not at all alarming, but the area should be kept under annual observation.

11. Allen Ridge Unit

Total acres	800
Acres of Strip	33
Coverage of area	4%
Trees on strip attacked M.P.B. 1949 (White pine)	1
Number of 1949 attacks on strip	.03
Total 1949 attacks	.24

This unit lies in sections 14, 22, 23, 26, 27, T. 45 N., R. 6 E. Forest type is of white pine and lodgepole pine and associated tree species. White pine is found on the lower elevations with lodgepole confined to the ridge tops. Only one new attack of the mountain pine beetle in white pine was recorded, and two red tops observed from an extensive reconnaissance.

12. Sisters Basin Unit

Total Acres	1200
Acres of Strip	23
Coverage of Area	1.9%
Trees on strip attacked by M.P.B. 1949 (White Pine)	1
Number of 1949 attacks per acre	.043
Total 1949 Attacks	51

Sisters Basin Unit is in sections 17, 18, 28, 29, T. 44 N., R. 6 E. The forest type is of white pine growing with associated tree species. There are a few scattered patches of lodgepole pine. White pine trees are for the most part old and mature. Only one 1949 attack of the mountain pine beetle was recorded, but there was evidence of some old attacks.

13. Alpine Creek Unit

Total Acres	480
Acres of Strip	20
Coverage of area	4.1
Trees on strip attacked by M.P.B. 1949	0
Number of 1949 attacks on strip	0
Total 1949 attacks	0

This is a small area of white pine located in the Alpine Creek drainage. It comprises parts of sections 23, 24, 25, 26, T. 44 N., R. 6 E. A light infestation was reported from this area in 1948, but this years survey failed to disclose any 1949 attacks.

State Line Area

Along the Idaho Montana divide, from Cliff Creek to Simmons Creek, there are large numbers of white bark pine trees showing discolored foliage. Several hundred of these trees around Wishard Peak, Craddock Peak, Cliff Creek, Bald Mountain and Broadaxe Creek, were examined. This foliage condition was confined entirely to white bark pine. In all instances the discoloration of foliage was considered as being due to a severe infestation of blister rust. No attacks of the mountain pine beetle were found in any of these trees.

Quartz Creek Unit

An extensive red top reconnaissance was made of this area from ridge tops and other vantage points. Although good views were obtained of the area, only a relatively few red toped trees were observed. This condition did not warrant a more intensive survey of this drainage.

Gold-Bruin Creeks Area

The area between Gold and Bruin Creeks was covered by a thorough red top extensive survey. As only a very few red toped trees were recorded the condition did not warrant a more intensive survey.

SUMMARY AND RECOMMENDATIONS

The most serious infestation recorded by this survey lies in the Aspen-Entente, Float Creek, Head of Gold Creek, and Head of Quartz Creek Units. In these units there is an infestation of the mountain pine beetle in lodgepole pine that can become quite serious. These units cover most of the area reported by Mr. Gibson in 1948. This seasons survey would seem to indicate that in some portions of the area, there has been a slight increase in the severity of the infestation. Last season a fear was expressed by local Forest Officers as to the danger of this infestation spreading into the many valuable white pine stands adjacent. This possibility was rather thoroughly checked during this seasons survey, with no indication of such an occurrence being apparent.

In considering the economic importance of this infestation there are two possibilities, the destruction of the lodgepole pine throughout the area, and the spread of the beetles into white pine stands adjacent. It would seem that the later possibility offers the greatest justification for control. In these four units there are some 2700 acres, on which there is an infestation of .5 of a tree per acre, or a total of 1400 trees. It is also quite possible that there are some other areas of lodgepole pine. If this is true the total of infested trees could be increased. However, it is believed that the units as listed include most if not all of the infested lodgepole area.

Although both lodgepole pine and western white pine are accepted hosts of the mountain pine beetles, there is no assurance that a change of host from lodgepole pine to white pine will occur. In view of all factors associated with this infestation I am assuming that the threat which this infestation bears to the adjacent white pine stands, is the greatest economic justification for control. If this assumption is correct, and the loss of lodgepole in this area is of no great concern, I would not recommend control. I do not believe that there is any danger of such a spread or change of hosts as long as the infestation remains at or near its present level. As a result no serious consequences would result from allowing the present infestation to go untreated, other than a possible increase in the severity of the lodgepole pine loss. No control measures are recommended for this area but a careful survey of the entire area should be made in 1950.

To treat this infestation it is estimated that 275 effective man days would be required. This would be a rather expensive project, and some-

what difficult. The area is high and snow conditions could prevent the start of such a project until late May. Although there may be an increase in the severity of the 1950 infestation, it is not believed that it would add naturally to the cost of control as compared to the present situation.